

What is claimed is:

- 1 1. A post clamp for use in a molten metal pump, the clamp for positioning a
2 superstructure of the pump relative a support post, the post clamp including a cavity for
3 receiving an end of the support post, a lower flange for connecting to the
4 superstructure, and an upper flange that supports at least part of the weight of the
5 superstructure when the molten metal pump is in use.
- 1 2. The post clamp of claim 1 wherein the clamp is a one-piece clamp.
- 1 3. The post clamp of claim 1 wherein the clamp is a two-piece clamp.
- 1 4. The post clamp of claim 3 wherein each piece has a lower flange for connecting to the
2 superstructure.
- 3 5. The post clamp of claim 1 that is comprised of steel.
- 4 6. The post clamp of claim 3 wherein each piece has an aperture, and the apertures are
5 aligned so that a single bolt may pass through each aperture.
- 1 7. The post clamp of claim 3 wherein each piece has an upper flange for supporting at
2 least part of the weight of the superstructure.
- 1 8. A molten metal pump including a superstructure and a plurality of support posts for
2 supporting the superstructure, each of the support posts having a substantially similar
3 height.
- 4 9. The molten metal pump of claim 8 wherein each of the support posts has a height H
5 plus or minus 0.010".
- 6 10. The molten metal pump of claim 8 wherein each support post has a top and the
7 superstructure is supported at least in part by the top of each support post.

11. The molten metal pump of claim 8 wherein none of the support posts includes a through bolt hole.
12. The molten metal pump of claim 8 wherein one or more of the support posts includes a through bolt hole.
13. The molten metal pump of claim 8 wherein each of the support posts has a through bolt hole.
14. The molten metal pump of claim 13 wherein a bolt is received in each of the through bolt holes and each through bolt hole has a diameter greater than the diameter of the bolt received therein.
15. The molten metal pump of claim 14 wherein each through bolt hole has a diameter of 1/32" or more greater than the diameter of the bolt received therein
16. The molten metal pump of claim 8 wherein the pump includes a pump base having a discharge and a gas-transfer conduit attached to the discharge.
17. The molten metal pump of claim 8 wherein the pump includes a pump base having a discharge, a metal-transfer conduit attached to the discharge and a gas-transfer conduit attached to the metal-transfer conduit.
18. The molten metal pump of claim 15 that is a transfer pump, that includes a pump base having a discharge and that includes a metal-transfer conduit attached to the discharge.
19. A support post for use in a molten metal pump wherein the support post has an outer wall and an end that is secured to a superstructure of the pump and the end does not include a through bolt hole or a groove formed in the outer wall.
20. The support post of claim 19 that is comprised of graphite.
21. A plurality of support posts for use in a molten metal pump, wherein each of the

plurality of support posts has a height, an end and a top surface, each end for being received in a post clamp and each top surface for supporting at least part of the weight of a pump superstructure, wherein each of the plurality of support posts has a height H plus or minus 0.010”.

22. The plurality of support posts of claim 21 wherein each of the support posts is comprised of graphite.
23. The plurality of support posts of claim 21 wherein each of the support posts further includes a ceramic sleeve.
24. The plurality of support posts of claim 21 wherein each of the support posts includes a through bolt hole at its end.
25. A post clamp for use with a molten metal pump, the pump including a superstructure having a weight, and at least one support post wherein the support post has an end; the post clamp having a section for securing the post clamp to the superstructure and means for enabling at least part of the weight of the superstructure to be supported on the end of the at least one support post.